Welcome to Exoplanet Forum 2008

National Aeronautics and Space Administration

EXOPLANET FORUM 2008

29-30 May 2008

Hilton Hotel, Pasadena, California

The purpose of this Forum is to develop a coordinated, integrated science case for exoplanet exploration, and to outline the technology development needed to carry out exoplanet missions. Register for the Forum at http://exep.jpl.nasa.gov. The Forum is sponsored by NASA's Exoplanet Exploration Program. With the Exoplanet Task Force Report as a basis, we will develop the case for missions and technologies in a format useful to science policy makers. This will be a community-based report, in book form. Key chapter topics and corresponding Science Organizing Committee and Local Organizing Committee members are:

TOPIC	SOC	LOC
Astrometry	Matthew Muterspaugh	Angelle Tanner
Direct Imaging by Coronagraphy	Remi Soummer	Marie Levine-West
Direct Imaging by Interferometry	Bill Danchi	Peter Lawson
Exozodiacal Disks	Phil Hinz	Rafael Millan-Gabet
Microlensing	Scott Gaudi	Andy Boden
Radial Velocity	Willie Torres	Dawn Gelino
Transits and Photometry	Drake Deming	Mark Swain

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Exoplanet Forum 2008

- Purpose: Provide an integrated, coherent plan for exoplanet missions in the 2010s.
- Method: Describe science and technology of main technique-based exoplanet detection & characterization methods, in a community-based book.
- Goal: Provide information to Exoplanet Program Advisory Group (ExoPAG) and Decadal Survey in a form that facilitates decision making.

Organization and Timeline

- Forum Organization:
  - Forum meeting was requested by NASA HQ
  - 7 group leads appointed
  - telecons organized to write respective chapters
  - template provided
  - meeting in Pasadena on 29-30 May to revise 1st drafts
  - ~180 participants
- Forum Book Timeline:
  - 2nd draft due mid-July
  - to HQ for review late July
  - to ExoPAG mid-September
  - view-graphs to HQ for review in early December
  - view-graphs presented at AAS in January
  - approved by HQ in January
  - printed in February
  - mail to Decadal Survey in March

Registrants

Total Registrants: 176

Astrometry (A): 48
Direct imaging - optical coronagraphy (C): 77
Direct imaging - mid-IR interferometry (I): 40
Exozodiacal disks (E): 30
Radial velocity (R): 29
Transits (T): 41
Microlensing (M): 10
General interest (G): 76

We are here in spite of competition from CoRoT discoveries, IAU transit meeting, Phoenix landing, World Science Festival, exhaustion from the ExoPTF writing, and parallel meetings.

Inputs & Outputs

- Inputs:
  - ExoPTF Report to AAAC (196 pp)
  - NASA budget expectations
  - Current knowledge of exoplanet characteristics
  - Potential knowledge from future characterization

- Outputs:
  - Science (status & future) in each technique area
  - Missions to achieve future science
  - Technology milestones needed for missions
  - Book of exoplanet Science/Missions/Technology in 2010s in 7 technique-oriented chapters

Book Outline

- Title: Exoplanet Exploration in the 2010s
- Editors: Traub, Unwin, & Lawson
- Forward: Dressler
- Executive Summary: Editors & chapter leads
- Astrometry: Muterspaugh, Tanner & 48 co-authors
- Direct Visible Imaging: Soummer, Levine & 77 co-authors
- Direct Infrared Imaging: Danchi, Lawson & 40 co-authors
- Exozodiacal disks: Hinz, Millan-Gabet & 30 co-authors
- Microlensing: Gaudi, Boden & 10 co-authors
- Radial Velocity: Torres, Gelino & 29 co-authors
- Transits & Photometry: Deming Swain, & 41 co-authors
- Appendices: list of authors, ...

Prioritizing Issue

- Ben Franklin: "We must hang together, gentlemen...else, we shall most assuredly hang separately."

- Jon Morse: “provide an integrated, coherent plan”

- Suggestion: adopt Mars or Beyond Einstein model:
  - Probe-class technique-A mission ASAP
  - Probe-class technique-B,C missions to follow, with timing and order to be assessed post-Survey
  - Flagship D-technique mission in ~2020
  - Flagship E-technique mission in 2020s

Agenda: Thursday

	Thursday 29 May 2008	
	San Gabriel Room	
7:30	Registration open	Dani Lopez & Ozhen Pananyan
8:00	Coffee and Healthy Donuts	
8:30	Introduction 1 and Discussion	Wes Traub, Steve Unwin, Peter Lawson
8:40	Exoplanet Exploration Program View	Michael Devirian
8:50	NASA Headquarters View 1	Doug Hudgins
9:00	Astrometry 1	Matt Muterspaugh and Angelle Tanner
10:00	Coffee etc.	
10:30	Astrometry 2	Matt Muterspaugh and Angelle Tanner
11:30	Direct Imaging by Coronagraphy 1	Remi Soummer and Marie Levine-West
12:30	Working Lunch	
1:00	Direct Imaging by Coronagraphy 2	Remi Soummer and Marie Levine-West
3:00	Coffee and Juice	
3:30	Direct Imaging by Interferometry 1	Bill Danchi and Peter Lawson
4:30	Stretch	
4:45	Direct Imaging by Interferometry 2	Bill Danchi and Peter Lawson
5:45	Radio technique	Daniel Winterhalter and Walid Majid
6:00	Discussion	
6:30	End First Day	

Agenda: Friday

	Friday 30 May 2008	
	San Gabriel Room	
7:30	**Registration open**	**Dani Lopez & Karla Miller**
8:00	**Coffee and Healthy Donuts**	
8:30	**Introduction 2 and Discussion**	**Wes Traub, Steve Unwin, Peter Lawson**
8:40	**NASA Headquarters View 2**	**Eric Smith**
8:50	**NASA Headquarters View 3**	**Zlatan Tsvetanov**
9:00	**Exozodiacal Disks 1**	**Phil Hinz and Rafael Millan-Gabet**
10:00	**Coffee etc.**	
10:30	**Exozodiacal Disks 2**	**Phil Hinz and Rafael Millan-Gabet**
11:30	**Microlensing 1**	**Scott Gaudi and Andy Boden**
1:00	**Working Lunch**	
1:30	**Radial Velocity 1**	**Willie Torres and Dawn Gelino**
2:30	**Coffee and Juice**	
3:00	**Radial Velocity 2**	**Willie Torres and Dawn Gelino**
4:00	**Transits and Photometry 1**	**Drake Deming and Mark Swain**
5:00	**Stretch**	
5:15	**Transits and Photometry 2**	**Drake Deming and Mark Swain**
6:15	**Discussion**	
6:30	**End Second Day**	

Logistics

- Pay $15 for buffet lunch, before 9am
- Working lunch: OK to eat at tables
- Validate (=stamp) parking slip, $9 vs $15